PCT WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 7 : G01N 21/29 — A1

(11) International Publication Number: WO 00/55602

(43) International Publication Date: 21 September 2000 (21.09.00)

(21) International Application Number: PCT/US00/04022

(22) International Filing Date: 18 February 2000 (18.02.00)

(30) Priority Data:
60/124,755 17 March 1999 (17.03.99) US
60/125,686 23 March 1999 (23.03.99) US

(71) Applicant *(for all designated States except US)*: UNIVERSITY OF VIRGINIA PATENT FOUNDATION [US/US]; 1224 West Main Street, Suite 1–110, Charlottesville, VA 22903 (US).

(72) Inventor; and

(75) Inventor/Applicant *(for US only)*: LAUFER, Gabriel [US/US]; 1616 King Mountain Road, Charlottesville, VA 22901 (US).

(74) Agent: SUFFREDINI, Brian, R.; University of Virginia Patent Foundation, Suite 1–110, 1224 West Main Street, Charlottesville, VA 22903 (US).

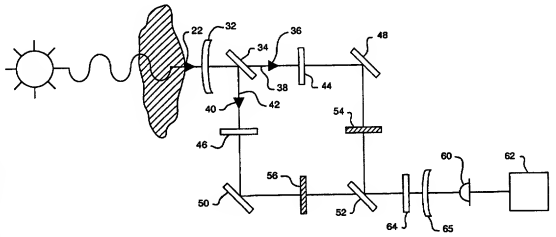
(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published

With international search report.

Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

(54) Title: PASSIVE REMOTE SENSOR OF CHEMICALS



(57) Abstract

A remote sensor for use as a handheld, mobile or stand–alone sensor has first (12) and second (16) optical paths, light collecting optics, a sample filter (10) assembly positioned in a first optical path (12), a reference filter (14) assembly positioned in a second optical path (16), a detector assembly to detect the filtered light or other radiation, and a detector output comparison device such as a BRD to minimize the effects of common background noise components, differences in light or other radiation source power, and absorption or emission by interfering species.